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PROPOSED PROGRAMME BUDGET FOR THE BIENNIUM 1996-1997

Integrated Management Information System project

Seventh progress report of the Secretary-General

SUMMARY

The aim of the Integrated Management Information System (IMIS) is to contribute to the current efforts to improve the efficiency of the administrative and financial functioning of the Secretariat by enforcing consistent processing procedures and by improving quality and timely availability of financial and personnel data throughout the Organization.

The common database and applications, as originally planned, were to deal with personnel management, post management, payroll, accounting, purchasing, travel, and budget formulation and execution. Resources initially budgeted were inadequate in view of the magnitude and of the complexity of the task, while the need for the Organization to provide internal resources to support the development and implementation effort had been underestimated. In 1994, as reflected in the sixth progress report of the Secretary-General a/ it therefore became urgent to reprogramme and rebudget the entire project to ensure the completion of this essential undertaking.

One year later the work is proceeding steadily, substantially on target and within the budget. Release 2, Personnel entitlements, was implemented in April 1995 and Release 3, Accounting, procurement and travel, will be implemented to run in parallel as of January 1996. The first releases of the system will start being deployed at offices away from Headquarters as of the end of 1995. The budget requirements for the biennium are in line with the budget estimates submitted in 1994, as revised by the Board of External Auditors at the request of the General Assembly. The budget for the project for the biennium 1996-1997, as reflected in document A/50/6, Section 30, is estimated at $11,967,600. The maintenance budget is estimated at $7,618,400.

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The human resources applications function satisfactorily and have made it possible to improve the management of staff and posts at Headquarters considerably. Release 3 is by far the largest and most complex of the entire system. It will force hundreds of users to modify the way they have been working for years and will introduce radical changes in the financial operations of the Organization. As is always the case with the implementation of large financial systems, implementation difficulties are likely to arise and an already heavy workload will increase temporarily for many staff, in particular in the Office of Programme Planning, Budget and Accounts. Changes to the system and to procedures will be required and it is consequently expected that it will take several months before normal operations under the new system are in place. This situation is to be expected and has been anticipated, but the risks should not be underestimated.

The implementation of the system at offices away from Headquarters will enable them to benefit from the experience gained at Headquarters and provide them with management tools never available to them before. The change in management will also be difficult at these duty stations but the preparatory activities currently under way should diminish the risks of failure.

The biennium 1996-1997 will mark the transition from the development to the maintenance phase of the system. The investment made by the Member States over the past six years, in fact, requires the establishment of a careful maintenance plan so that the software does not become obsolete. The development team will be replaced by a technical maintenance unit that will work closely with the various areas of the Department of Administration and Management, the Department of Peace-keeping Operations and offices away from Headquarters.

Member States will derive additional benefits from the project owing to the usage of the system by other entities of the United Nations common system which can obtain the software free of charge. The International Labour Organization (ILO) implemented the first release of the system early in 1995 and the United Nations Development Programme (UNDP) is planning to have it implemented early next year. Furthermore, the Secretary-General recently decided that, in order to meet the desire of Member States to improve efficiency, avoid duplication of effort and maximize the returns of investments made, the system should be used by the United Nations as a whole. The Office of the United Nations High Commissioner for Refugees (UNHCR) and the United Nations Children's Fund (UNICEF) have therefore been requested to make plans for the implementation of the system.

Notes

a/ A/C.5/48/12/Add.1.

I. INTRODUCTION

1. The purpose of the Integrated Management Information System (IMIS), the first phase of which was approved by the General Assembly in section XII of its resolution 43/217 of 21 December 1988, is to develop an integrated system for the processing of, and reporting on, administrative actions at all major duty stations. IMIS will replace the numerous independent systems, many of which, built many years ago and mostly for regular budget activities, are no longer able to provide the support needed by management at a time of rapidly changing needs and increasing demands made on the administrative sector to support peace-keeping activities and those financed from extrabudgetary resources. The main areas covered by the system are: personnel management; post management; accounting; purchasing; travel; payroll and budget execution. The Secretary-General has since submitted six progress reports, in 1989, 1/ 1990, 2/ 1991, 3/ 1992, 4/ 1993 5/ and 1994. 6/

2. Release 1 of the IMIS system, comprising personnel applications, was successfully installed at Headquarters at the end of September 1993. The implementation of the first release confirmed the need for the system, the benefits that the Organization and Member States will derive from it and the validity of the technological choices that had been made. It has also revealed, however, that the Organization's strategy for the completion of the software construction phase of the system and for its successful implementation world wide had been inadequate. In early May 1994, a thorough reprogramming and rebudgeting of the project was therefore undertaken with the aim of redefining the level of resources that will be required for its completion and determining the resources that can be internally reassigned to the project, for the purpose of providing Member States with all the necessary accurate information on the expected future costs of the project.

II. OVERALL ASSESSMENT OF THE IMPACT OF THE INITIAL IMPLEMENTATION

3. After two years of operation of the first part of the system at Headquarters, and with the completion of the development of Release 3, related mainly to financial applications, it is clear that the impact of IMIS will be far greater than initially expected. This positive factor, however, adds complexities to the overall already difficult task undertaken.

4. In the end, IMIS will lead to the greatest changes in the management of the Organization since its inception. Procedures are being modified, accurate data on staff and post incumbencies are now available, and financial data will soon be available. Most importantly, entire working methods are being changed. Greater decentralization has been achieved, and monitoring tools for these activities are being made available to the Department of Administration and Management. A more global approach to administrative procedures involving all parties concerned (Department of Administration and Management offices, Field Administration and Logistics Division and executive offices) has been established because IMIS, by its integrated nature, has shown the interaction and dependencies of all activities involving these user groups.

5. While reports showing the status of staff and posts have been available since the initial implementation of the system, more sophisticated management reports reflecting the personnel-related administrative activities at Headquarters are now available (for example, the number of personnel actions by type processed over a given period by the various user groups). This enables the central management to monitor and evaluate the administrative activities of the Organization better and to use IMIS as a planning tool. The Joint Inspection Unit, in its recent report entitled "Management in the United Nations: work in progress" 7/ referred specifically to this benefit.

6. As far as procedures are concerned, the development of the system, and of Release 3 in particular, has forced the Organization to review in detail hundreds of processes to determine the most appropriate way to re-engineer and standardize procedures and rationalize the workflows. The need for consistency, and the requirements for additional data not recorded so far will, however, lead to procedures that, in some cases, may appear cumbersome to users. A complete new manual that will integrate IMIS operational procedures, including manual procedures outside of the system, with financial and support services operations, is close to completion. It will add to the one already available for human resources applications and a third one recently developed, on the maintenance of reference tables, where the main values required for the operations of the system, such as currency rates, salary scales and account codes, are stored.

7. The development of the system also brought to light how complex, sometimes contradictory, and often difficult to implement are the rules and regulations of the Organization. This situation lends itself to high processing costs in terms of manpower, sometimes adding an unnecessary overhead to administrative processes. While the implementation of the system has already introduced a certain amount of rationalization, it is felt that as a next step, the United Nations administration and the common system institutions, while developing new rules, must take into account the costs involved in their applications. The methodologies used for the development of the system, in particular the workflow analysis and the system design documents, can be used to assess the impact and cost of any proposed new rule or procedure in a better way.

8. From a technical point of view, the system continues to operate at Headquarters with practically no interruption, and the technical architecture for both the system and the reporting facility that was recently introduced is in line with industry standards. Several articles on the system have been published by the specialized press in this respect and representatives of the private and public sectors from a number of Member States have approached the Organization to obtain information and demonstrations of the system.

9. Recent analysis on the issues related to the development of large systems 8/ in the public sector has highlighted both the difficulties and the inherent high risks and costs involved in this kind of undertaking. As was foreseen at the time of the reprogramming of the project in May 1994, in the next biennium, a major effort will continue to be required on the part of the Organization to achieve the project.

10. The operations of IMIS applications already implemented have also confirmed the need to ensure that the system, once completed, is properly maintained. Maintenance will ensure that the initial investment is not wasted, the value of information technology having been confirmed as one of the most important requirements for modern management.

11. The implementation of the first releases at Headquarters, and the results of the surveys conducted at offices away from Headquarters, have also confirmed the fact that the Organization has not developed its basic technology strategy as far as information technology is concerned, mainly in terms of infrastructure. Corrective measures will need to be taken very rapidly on the basis of a global strategy to be defined next year.

12. More detailed examples of the impact of the introduction of the system are included in the following relevant parts of the report. It must be emphasized that the implementation of the new releases at Headquarters and of the system as a whole at offices away from Headquarters and peace-keeping missions presents many challenges. As is the norm in this type of undertaking, and taking into account in particular the fact that the introduction of Release 3 will bring by far more extensive changes in United Nations administrative operations than the first two releases, some initial confusion and resistance on the part of users can be expected. Some programmes in the system will prove inadequate and will need to be modified very rapidly; more difficult changes will require the development of specific procedures pending their coding into the system. As a consequence, and as foreseen in the sixth progress report, it is expected that the benefits of the introduction of the system will not be fully realized immediately. The continued support of Member States and of the users at large will be essential over the next biennium.

III. PROJECT SCHEDULE

13. Within the framework of the reprogramming of the project presented in the sixth progress report, a tentative new project schedule was introduced. In a subsequent report, 9/ the schedule was updated. With the exception of the implementation date of Release 4, Payroll, which will need to be confirmed once work has progressed further, it is expected that the current schedule will be adhered to and that the entire system will be implemented world wide by the end of 1997, as stated in the sixth progress report.

14. As scheduled, Release 2, Staff entitlements, was successfully implemented on 1 April 1995. The release presented a major challenge owing to its complexity. The automatic calculation of staff entitlements required the introduction of new sophisticated software, an object-oriented expert system, used to programme the rules, and staff data had to be up to date to enable the system to determine staff entitlements correctly.

15. Release 3, which covers finance, procurement, property and inventory control, and travel, and is by far the major component of the entire system, will be implemented, to run in parallel, effective mid-January 1996, until the end of March when the parallel run will terminate and the system will be deployed to all users. Some delays (about two months) in the commencement of

the parallel run have occurred. It was in fact considered desirable to fully ensure that the system integrates properly.

16. Release 4, Payroll, has been rescheduled for the last quarter of 1996. This is due to the fact that it became necessary to assign to Release 3 implementation most of the resources available, in terms of both project staff and users. Release 4 will be based on all the previous releases, and preparatory work for its design, mainly concerned with issues requiring policy decisions, is currently actively under way.

17. Implementation at offices away from Headquarters of releases 1 and 2 is scheduled to start at the end of 1995 and is expected to be completed by the end of 1996.

18. In parallel, plans have started, in close cooperation with the Department of Peace-keeping Operations, to implement IMIS at selected peace-keeping missions, starting in the second quarter of 1996, well ahead of original plans.

IV. STATUS OF IMPLEMENTATION OF RELEASES 1 AND 2

19. Release 1, Personnel processing, implemented in September 1993, stabilized by early 1995. As reported in the sixth progress report, the major difficulties for its implementation originated from the lack of reliable data prior to the introduction of the system.

20. Major progress has been made since then. Currently, records of all staff members payrolled at Headquarters are maintained in IMIS. As of October 1995, there were more than 7,800 active staff administered through IMIS, located at about 70 different duty stations world wide. This includes international staff for peace-keeping operations, Department of Public Information staff at information centres around the world and short-term conference staff at Headquarters. Equally, the authorized staffing table is maintained up to date in IMIS and post incumbencies are monitored closely. In addition, the records of 8,500 dependants, 4,000 other household members, and of 22,000 former staff members, are available on line in IMIS.

21. While until mid-1994 there were up to 1,700 staff with outdated contract situations (for example, working while the renewal of their contract had not yet been processed), at present there are less than 100 at any point in time, most of them with contracts that expired during the current month, a very low figure considering the high degree of mobility of short-term conference staff and of mission appointees. It should be noted that these cases refer to active staff, occupying valid authorized posts or charged to temporary assistance, actually working, and for whom the procedures for extension of appointments are in process. No irregularities were found in the staffing situation or in the post incumbencies during the updating of the records.

22. Every day, summary statistics showing the current staffing situation of the personnel administered at Headquarters, by department, are generated and circulated to the senior management for monitoring purposes. As of 1 June 1995, the official staffing table of the Organization, for Headquarters, is that

reflected in IMIS, and executive offices are responsible and accountable for maintaining it up to date.

23. Starting in May 1995, a new reporting application developed by the IMIS team was deployed to selected users in the Office of Human Resources Management, the Office of Programme Planning, Budget and Accounts, executive offices and the Field Administration and Logistics Division. It enables them to generate a wide range of management and administrative reports independently according to their own needs. Additional reports are provided on an ongoing basis. In addition, ad hoc reports can be generated by selected staff in the Office of Human Resources Management, the Office of Programme Planning, Budget and Accounts and the Field Administration and Logistics Division. A second group of 100 users is expected to be connected to the reporting application by the end of 1995.

24. A certain number of management reports and statistics on the usage of the system, on the number of personnel actions, for example, by type and department/office, are also being generated (see annex I). They are being analysed and refined so that they can be used as management tools to evaluate the workload, the major operational activities etc. Other reports are being developed by UNDP in close cooperation with the United Nations and will be made available to United Nations users.

25. As of mid-October 1995, there were 834 users connected to the system. By the end of February 1996, it is planned to add about 400 more.

26. After the implementation of Release 1 at Headquarters, a number of additional features were identified by users as necessary. The majority of these have now been included, and Release 1 is now ready for deployment at offices away from Headquarters and peace-keeping missions.

27. With the implementation of Release 2, a total of 16 entitlement calculations, from base salary to dependency allowances to salary differentials, were introduced. The system proved to be functioning satisfactorily. When approving a personnel action, users must review the entitlements that have been determined by the system for the staff member concerned. They can obtain an explanation of the reasons that they were granted or that others were denied. When justified, they may process waivers to the rules. However, a strictly limited number of users is authorized to perform that function and detailed justification for the exception needs to be entered into the system. Through Release 2, therefore, it is possible to monitor the applications of the rules concerning entitlements. This consistent application of the rules is a key element for the construction of the payroll.

28. The implementation of Release 2 however, apart from further demonstrating the fact that many of the United Nations common system rules are particularly complex and difficult to administer, highlighted the fact that some additional features and changes in the software were required in order to determine the monetary values of the entitlements better and to support payroll processing fully. Work was undertaken for the implementation of these changes and it is expected that they can be made available to the users by the end of 1995.

29. Releases 1 and 2 combined comprise 480 transaction screens. In addition, the users have at their disposal 2,680 help screens that detail the purpose and background of each main screen, the data input requirements and provide useful hints for the processing of specific transactions.

V. RELEASE 3

Main areas of activity

30. As already indicated, Release 3 is by far the largest and most complex of the entire system. Its implementation will introduce massive changes in the way financial transactions are performed, and major difficulties are likely to arise. Management and users at large, in particular the Accounts Division, will see their already heavy workload increase progressively over the next few months. While a peak is anticipated for the months of March, April and May 1996, it is expected that pressure will continue for the rest of the year. Release 3 encompasses the following main areas of activity:

(a) Recording of appropriations/budget authority, allotments and sub-allotments;

(b) Pre-encumbrances (funds sufficiency checking at the time of initiation of a transaction with financial effects and reservation of funds to avoid overexpenditure), i.e. requisitions;

(c) Obligations;

(d) Travel processing (from initial requests to settlement of claims, vendor payments for tickets, shipments and insurance);

(e) Payables (invoices, special service agreements, tax claims, repatriation grants, advances, etc.);

(f) Receivables (assessments, contributions, billing, inter-office, cash etc.);

(g) Cash management(receipts, disbursements, deposits etc.);

(h) Accounting (expenditure distributions, bank statement reconciliations, general journal voucher, etc.);

(i) Batch procedures (accounts opening/closing, which includes a number of batch processes which must run before those closings, such as fellowship insurance and average costing for technical cooperation, programme support costs for the relevant funds, revaluations, the closing of pre-encumbrances at the end of the biennium, etc.);

(j) Bridges (temporary interfaces) with existing systems, essentially Payroll;

(k) Permanent interfaces with existing systems;

(l) Procurement, including catalogue and vendors' roster;

(m) Inter-office vouchers;

(n) Property and inventory control;

(o) Education grant processing.

31. Release 3 will introduce a large number of new functionalities. It is worth mentioning the most relevant.

Automated posting rules

32. One of the main features of this release is the automation of the posting rules, i.e. the automatic posting of financial transactions to the general and subsidiary ledgers, which ensures that in the majority of cases the postings are applied consistently. There are now some 350 unique posting rules which are driven by fund type. Thus, according to the fund type and the type of transaction being processed, the system reviews a number of parameters, selects those that are applicable and is then able to choose the correct posting rule to be applied after the financial document is approved or amended, i.e., the accounting entries are automatically recorded in the accounting ledger tables. While this system ensures greater accuracy, a close monitoring of its functioning will initially be required to ensure that it functions properly.

Pre-encumbrances, obligations and funds sufficiency checking

33. IMIS introduces the concept of pre-encumbrances, which is a timely and more accurate picture of reserved funds, allowing users to enter requisitions or requests for services directly into IMIS prior to the obligating stage. Once the transaction is finalized, the obligation is set and there is an automatic liquidation of the relevant pre-encumbrance lines. Transactions must be pre-encumbered and automatic funds sufficiency checking will be performed against the allotment by the system once the pre-encumbrance is approved. Should sufficient funds not be available, the system will not permit the transaction to proceed. This procedure will ensure that expenditures do not exceed the approved appropriations or allocations. It is expected that, initially, this new strict control mechanism will be found difficult to administer by some users and a careful monitoring of its functioning on the part of the Office of Programme Planning, Budget and Accounts will be required.

Payables, receivables, automatic closing of accounts and multi-currency operations

34. In IMIS, once an obligation is approved and goods are received, inspected and certified, a request for payment is set up within the system, thus for the first time introducing the concept of automated accounts payable for the United Nations. Additionally, receivables of all types are set up and handled in IMIS, allowing liquidation once payment is received. Each transaction may be handled in any currency and IMIS allows conversion from and to the United States dollar using the correct United Nations exchange rate for the period in question.

35. A further feature is the automated opening and closing of financial periods. A series of processes, such as obligation and pre-encumbrance liquidation, programme support costs, average costing (for technical cooperation) etc., are performed prior to the final closing of a fund. Similarly, there are processes which provide for periodic or daily updates of account balances.

Cheque-writing

36. IMIS takes a transaction through its full life cycle to the actual point of payment, i.e. the issuance of a cheque or electronic funds transfer. It was decided not to include cheque design in IMIS owing to the complexity and cost of such a task; it would be preferable to procure a package available on the market and modify it if necessary. This was done, and the disbursements from IMIS will be forwarded to the cheque-writing package through an interface that has been developed by IMIS staff. In order to ensure that this important application functions smoothly, it is intended to use it to print cheques from the current mainframe pending the introduction of IMIS next year.

Procurement processing

37. A stand-alone procurement software package already in use in the Secretariat, developed by a third party vendor, is being integrated with IMIS. The requisitions will be processed in IMIS for funds sufficiency checking and subsequently the information will be transferred into the procurement software package. The normal procurement activities will take place, such as the bidding process, the evaluation of bids and the selection of a vendor, and the creation of a purchase order using the latter. Purchase orders will be compared in IMIS with the pre-encumbrance line amounts to ensure that they do not exceed the funds available. Receipts will be recorded in the procurement software package and the information transferred to IMIS, where inspection, invoice-matching and payments will be processed. Part of the integration between the two systems will be introduced with Release 3, while the full integration will be phased in progressively thereafter.

Catalogue

38. Another new concept introduced by IMIS is the "Catalogue", which will consist of standardized specifications of commonly requisitioned items. The requisitioner in the user departments will select an item from the catalogue, which will provide a unique number, complete specifications and unit of measure and indicative price. For those items not included in the catalogue, the users will be able to access standard United Nations commodity classification codes and modify the general specifications to meet the required item or service.

39. The catalogue will facilitate the procurement process by identifying clearly the items required; facilitate better stock or inventory record-keeping; facilitate accurate property management records; and provide more specific procurement statistics. As of the implementation of Release 3, the first release of the Catalogue will be available on-line.

Suppliers (vendors) roster

40. Suppliers' records will be monitored centrally. At present, the procurement services at Headquarters are in the process of re-registering all their suppliers in order to update and provide clean data for inclusion in the consolidated database.

41. New suppliers will be entered in IMIS so that payments can be made. In addition, registered procurement suppliers, including additional information on commodities, etc., will be input into the procurement software package.

Property and inventory control

42. Property will be identified at the time the requisition is created. On receipt of the goods, the property records will be entered into a database, developed for the recent physical inventory count at Headquarters, and reports will be generated on the three types of property items (non-expendable, special and group inventory items).

Travel

43. With the implementation of Release 3, the travel processing information will be recorded in IMIS beginning with the initial travel request, so that all users involved with travel will be able to have on-line information on all travel requests, shipments and associated travel claims.

44. The travel process will be integrated with the personnel records and the funds sufficiency checking mechanism. Funds will be pre-encumbered and obligated automatically as the process is completed.

45. The associated travel claim will not only allow the handling of the travel claims but will also initiate payments to vendors for tickets, shipments and related insurance and liquidate the obligations.

Administration of non-staff members

46. With the implementation of Release 3, it will also be possible to administer through IMIS both technical cooperation staff charged to project posts and other persons who are associated with the United Nations but do not have staff member status, such as consultants, individual contractors and fellows. IMIS will in fact directly record the financial obligations arising from the hiring of these persons and will allow the completion of their appointment/nomination process only after checking the availability of funds and creating related obligations.

Bridges, interfaces and world-wide reporting

47. Budget interfaces and consolidation of world-wide data in addition to the bridges with the procurement system referred to in Release 3 will also include nine interfaces with systems that IMIS will not replace or that will be complementary to IMIS, and one bridge with payroll systems. Most of them will be phased out when IMIS has been implemented world wide.

48. Until IMIS is implemented by all the offices away from Headquarters, interim procedures have to be established for consolidating the world-wide personnel and financial data at Headquarters, for central monitoring and reporting. The interim procedures will, in most cases, add work and make it more complex, but will ensure that global financial and personnel reports will be more accurate.

49. Accounting data from such offices will continue to be input into the present general accounting system in the same manner in which it is input now. The data will be entered into IMIS at a summary level by means of general journal vouchers, thus allowing financial balances to be reported from IMIS; however, for the time being, budgetary expenditure reports will continue to be issued from the general accounting system.

50. A detailed review of the data distribution policy for finance will be undertaken well before overseas offices receive the financial module of IMIS. As each office away from Headquarters goes on-line with IMIS, different procedures will be put into operation whereby the general accounting system will no longer be utilized for that office's accounting data but IMIS will become the system of record.

51. Personnel data will be extracted from local IMIS databases in a format that allows easy updating of the current personnel system (IPPS) used by the Office of Human Resources Management. These data will be supplemented by data entered manually, as is the case now, on the basis of paper records received from offices where IMIS has not yet been implemented. World-wide reporting will continue to be generated from IPPS. Upon implementation of IMIS at the last office away from Headquarters, IPPS will be discontinued and all world-wide reporting will be generated from IMIS. Local reporting will be generated from IMIS as soon as implementation is completed at duty stations.

Financial reporting

52. The development of Release 3 financial reports has resulted in the identification of 244 reports that need to be developed. They have been categorized in various groups, reference table reports, interface related reports, daily processing reports, monthly processing reports and financial statements, and are under development.

Testing

53. The software has been under system and users' acceptance test since April 1995. The final series of testing started in October 1995 and is scheduled to continue until mid-February 1996. It concentrates on the more complex integration testing, i.e. the processing of hundreds of selected transactions, by type of fund, from the initiation to their completion. It is expected that by the end of the testing, more than 1,200 different transactions, taken from real examples, will have been processed, each one several times under different scenarios.

54. In parallel with the testing, the drafting of desk procedures is proceeding rapidly. This task must be coordinated closely with the testing since it is

necessary to document in detail how a multitude of transactions currently being performed in different ways will have to be processed through IMIS.

55. The users' review of the software, completed in April 1995, also elicited the need for additional functionalities not initially foreseen. In order to meet these requirements, special procedures, combining manual and automated processes in IMIS, are being established and, whenever necessary, plans are being made for future developments of these functionalities by the IMIS maintenance unit.

56. As recommended by the independent experts who reviewed the project in 1992, and by the Board of Auditors, end-users are fully involved in the test and in the drafting of manuals. This has imposed an additional burden on serving staff already under pressure owing to the increased workload generated by peace-keeping activities, and in particular in the Office of Programme Planning, Budget and Accounts.

57. Altogether 15 desk procedures manuals have been or are being developed to cover the main areas referred to in paragraph 30 above. As was the case for releases 1 and 2, these manuals will, in many cases, be the first ever created and made available to administrative staff. In the case of procurement, these procedures are complementary to those being developed within the framework of the procurement reform currently under way.

58. As was already done for the previous releases, the documentation will include a "quick reference guide", already completed, to assist the users in the identification of the initial steps for each type of transaction.

Data conversion

59. The conversion strategy for Release 3 has been updated to take into account the shift to full implementation on 1 April 1996 and the ending, by that date, of parallel operations. Every effort has been made to automate the conversion of data from existing records. It will also be necessary to enter some of the existing data manually, owing to the major differences between the current system and IMIS. In preparation for the conversion, a comprehensive review of outstanding accounting transactions and balances is currently under way to ensure that the data brought forward into IMIS have been critically assessed. The timing of the full conversion of data has been planned to take place towards the end of March 1996, so as to coincide with the final closing of the accounts for the biennium 1994-1995. In view of the volume and complexity of data, it is expected that, in some instances, manual reconciliations will be necessary.

Training

60. The training material for Release 3 implementation is being finalized. The programme, in line with the training strategy that was established in 1992, 10/ comprises a total of 26 training courses:

(a) One video course to provide a global overview of the functionalities being introduced;

(b) Five instructor-led courses to introduce the new concepts and operational changes being introduced in financial management;

(c) Twenty hands-on courses to enable the users to learn how to operate the system and the related new procedures.

61. The training will be conducted principally by United Nations staff who have been working on the system test and documentation for Release 3, assisted by outside contractors who have developed the training material. This strategy is in line with the recommendations made by both the external and internal auditors and that proved beneficial for the implementation of Release 2.

62. A training database will also be made available on line to enable users who have been trained, and future users, to practise without leaving their workplace. In this way costs for ongoing training and maintenance of training material will be minimized.

Expected impact of the implementation of Release 3

63. As mentioned earlier, it is difficult to assess in advance to the full extent the impact that the implementation of Release 3 will have on the operations not only of the central administration, but of all departments and offices at Headquarters. The changes introduced are so profound that they will require first and foremost a change in the way the Organization sees how it operates. In particular, the change from the way transactions have been processed manually for over 40 years will generate, initially, a certain confusion. It is expected, however, that the extensive training users will have had through the testing will lessen these difficulties.

64. It is also likely that immediately after the full implementation of Release 3 at Headquarters, adjustments to the software will need to be made to eliminate "bugs" in the system or to refine processes. A considerable effort will be required on the part of all staff, and initially it is expected that the current already very heavy workload will increase in the Department of Administration and Management, and especially in the Accounts Division and in the Purchase and Transportation Service. The need to run the interfaces with existing systems until the system is implemented at all duty stations will also increase the complexity of the work and the workload. It is only with the full implementation of the system world wide, by the end of 1997, that the additional workload is expected to decrease.

65. It is expected, however, that, after the initial difficulties, and once Release 3 has been in operation for a few months, both the Department of Administration and Management and the substantive departments and offices will start to see the benefits from the introduction of this module of the system. The most important ones will derive, in particular, from the timeliness in the availability of financial information, both on line and as printed reports available to senior managers, and from the funds sufficiency checking and control that will provide certifying officers with the ability to ensure that commitments are not made without appropriate funding.

VI. RELEASE 4

66. Release 4 comprises payroll, time and attendance, rental subsidy and personal insurance. The development of these applications will rely primarily on the information contained in the database and supported in the first three releases of the system.

67. Work has been initiated to ensure that all of the elements required for the processing of these functionalities have been incorporated fully in previous releases. In particular, the time and attendance and personal insurance modules have already undergone initial development and now need fine-tuning in order to attain successful incorporation in payroll.

68. In parallel, a series of policy issues (for example, mode, currency and frequency of pay, interpretation of 300 series staff rules, prorating of pay, etc.), together with an analysis of local procedures either internal to each duty station or dependent upon local factors, such as the exchange of information with local banks, are being reviewed in order to define the scope of the development work better. Within the framework of this strategy, the payroll team is currently fully involved in the testing of Release 3 and, in particular, the payroll bridge.

69. It is planned to complete the specifications by the end of December 1995 so that the actual development work can start early in January 1996.

VII. IMPLEMENTATION AT OFFICES AWAY FROM HEADQUARTERS

70. Activities for the implementation at offices away from Headquarters started early in 1995 with missions to survey the technical infrastructure and data situation at all offices.

71. On the basis of these surveys, the servers (main computers) to run IMIS locally were sized and purchased through competitive bidding. The platform selected for these offices has become the standard for an initial period of four to five years. At that time, a new competitive bidding process will be conducted to establish the new standard platform for a subsequent period. In this way, many of the problems encountered in the past owing to the existence of different platforms at various offices will be eliminated.

72. Each duty station is being equipped with three servers, except for Geneva, which will use four servers. The servers are being shipped ready to operate. They were physically configured according to IMIS specifications at Headquarters, and loaded with the production software and a practice database. Installation teams will travel from Headquarters to all offices; a comprehensive training programme for local technical staff has been prepared. By the end of 1995, the system will have been installed at three duty stations, Geneva, Nairobi and Vienna.

73. Through the survey, the degree of readiness to implement IMIS releases 1 and 2 at each duty station was assessed and plans are being made to address each situation. The following summarizes the conclusions of the surveys.

Addis Ababa

74. The technical infrastructure requires wiring of the building, upgrading of computers and building a computer room. Owing to the difficulty of converting locally available insufficient data, the data conversion will have to be based on manual updates of records available at Headquarters, which may be obsolete. It should be possible, however, to have a minimal infrastructure in place so as to be able to implement IMIS by the end of 1996.

Amman

75. The technical infrastructure is in place. The computerized data available are not sufficient, but, owing to the limited number of staff, this will not present any obstacle to the implementation of IMIS by the end of 1996. Detailed plans should be made to ensure that technically qualified and trained staff will be available at the time of the transfer of the headquarters to Beirut. In order to avoid disruption in the operations, it may be advisable to limit the number of users of the system initially, keeping its operations relatively centralized until the move to the new duty station.

Bangkok

76. Both the technical infrastructure and the data available are in good order. There should be no problem in implementing IMIS as of the first half of 1996. In this connection, it should be recalled that, in 1992, the Economic and Social Commission for Asia and the Pacific (ESCAP) decided to move to the same platforms, in terms of hardware and software, as the one chosen for IMIS, so that good technical skills have been developed locally since then.

Geneva

77. The implementation at Geneva will be the most difficult owing to the size of the duty station, the complexity of the technical infrastructure, and the existence of different organizational units that are independent and do not report administratively to the United Nations Office at Geneva.

78. Although concrete results have been reached over the past few years in improving the technical infrastructure at the Palais des Nations, the physical distribution of buildings and the relative autonomy of many Secretariat organizational units located in Geneva, made it difficult for the Electronic Services Section of the United Nations Office at Geneva to provide the increasing amount of services required. The IMIS surveys indicate that the size of the Section, while possibly adequate in the past when there was no need to support a local area network (LAN) serving all offices at the Palais and new technologies, may currently be insufficient. The United Nations Office at Geneva administration is currently reviewing alternatives to address these issues. They will be advised by IMIS technical staff.

79. In order to reduce the risks related to adding responsibilities to the Electronic Services Section, and to achieve economies of scale, it was decided to locate the four servers on which IMIS will operate at the International Computing Centre. The Centre will provide database administration and UNIX

support so that the Section will be able to devote all its efforts to the development and maintenance of the technical infrastructure at the Palais.

80. A similar situation arises concerning the data collection. Owing to the variety of administrative arrangements, there is no central repository of human resources data for the staff located in Geneva. Data on staff administered by the United Nations Office at Geneva were incomplete and the Budget Section had data only on post incumbencies related to posts that are located in administrative units under its responsibility. However the Office, in cooperation with the other organizational units located in Geneva, has started a data collection and cleansing exercise based on IMIS data specifications. Approximately 3,500 staff records have already been created and are ready for conversion to IMIS.

81. In parallel, a workflow analysis was completed with the help of a contractor. The Office is reviewing the results and recommendations of this analysis, and is establishing new workflows for IMIS implementation.

82. It may also be recalled that, to facilitate the transition to IMIS, the Director of Administration of the United Nations Office at Geneva has been officially entrusted with the responsibility for the implementation and management of IMIS in Geneva. 11/

83. By the end of November 1995, it is expected that a first group of future IMIS users at the Palais will be connected to the new IMIS servers and practice database so that they can familiarize themselves with the system. This will also facilitate the identification of possible issues related to local practices that may differ from those of Headquarters and will be the basis for the identification of users and the establishment of the new workflows.

84. All activities are now geared towards the implementation of releases 1 and 2 at the Palais during the second half of 1996. It is expected that this can be achieved, in spite of the difficulties described above.

Nairobi

85. Since the time of the survey, IMIS staff have assisted the United Nations Environment Programme (UNEP) in the set-up of the necessary technical infrastructure. Electronic data were not available from the United Nations Centre for Human Settlements (Habitat) (UNCHS) and UNEP lacked data on dependants. A plan was drawn up to implement IMIS initially in a centralized manner to assist in creating a stable set of data and facilitating the integration of the administrative activities of UNEP and UNCHS. This solution will have the advantage of not delaying the implementation of releases 1 and 2 pending further development of the technical infrastructure and a better definition of the workflows. As soon as the United Nations Office at Nairobi is established, the data problem will need to be addressed to enable implementation of the first two releases of the system early in 1996.

Santiago and Vienna

86. The results of the survey confirmed that both the technical infrastructure and the status of data on staff were ready for IMIS in these duty stations. It was confirmed that IMIS could easily be implemented at both these duty stations early in 1996.

87. The recruitment of local coordinators is proceeding and all of them are expected to be on board by the end of January 1996. The central implementation coordinator joined the IMIS team early in September and is currently finalizing a detailed implementation plan that will be the basis for preparing local plans. At the same time, issues related to local practices that may require adjustments to the software are being addressed in cooperation with all the duty stations concerned.

88. In September and October 1995, and in cooperation with the Field Administration and Logistics Division, the stand-alone procurement system already in use at Headquarters, in peace-keeping missions and in Geneva, that is being integrated with IMIS, was also successfully installed at Addis Ababa and Santiago.

89. In parallel, and in cooperation with UNDP, the training material and the on-line training database are being revised so that they can be made available to offices away from Headquarters by the end of 1995 to facilitate familiarization with the system.

90. Initially, the training will be administered mainly by Headquarters staff who are well experienced in the use of the system, partially assisted by contractors. It is also planned to have staff members from offices away from Headquarters associated with the training at duty stations other than their own. This will enable the Organization to build a cadre of staff with IMIS experience more rapidly. Finally, as initially planned, one human resources specialist from each duty station will participate early in 1996 in a one-month training programme at Headquarters to become familiar with the operations of the system. These staff members will subsequently be responsible for the help desk activities at their duty stations.

VIII. TECHNICAL INFRASTRUCTURE

91. The Electronic Services Division, in cooperation with the IMIS team, continued to strengthen the Headquarters LAN to ensure, inter alia, better support of IMIS. In this context, a central management system designed to install standard software from a central point of distribution is being implemented. This will significantly shorten and simplify the procedure used to connect users to the system.

92. In order to provide better support for reports, three new servers (computers) were installed so that personnel, financial and support services reports could be generated more easily without possibly impairing the operational side of IMIS. In doing this, the current industry trend to create "data warehouses" was followed closely.

93. To facilitate reporting, in fact, copies of the database are made every night and data more often required for reporting purposes are retrieved and reformatted to facilitate their availability. Specific reports are then developed and put on-line at the disposal of users. Each report contains a variety of selection criteria so that the users can de facto obtain customized reports according to their own needs.

94. As already indicated, servers were also purchased for offices away from Headquarters. The same architecture that is installed at Headquarters, including reporting servers, is being installed at all offices. In these offices, the reporting servers will also be used as a back-up for disaster recovery.

95. Finally, a larger server is expected to be delivered at Headquarters by the end of the year. It will replace the current main database server and will ensure greater capacity to operate releases 3 and 4. The server that was selected can be upgraded easily by the installation of additional micro-processors. This will enable the Organization to increase its processing capabilities, if need be, at a reduced cost. It is in fact extremely difficult to assess in advance what the actual computer power required will be in view of the fact that almost all processes introduced with Release 3 will be new and cannot be compared with existing processes to determine the processing power required. The current main server will be used for the corporate database (repository of consolidated data from all duty stations) and for disaster recovery.

96. It is also necessary to ensure that IMIS continues to run using up-to-date software tools in order to avoid technological obsolescence. While a too-frequent upgrade to each new version of the various software components is being avoided, to reduce costs and workload, it is necessary to plan for moving to new versions of the database management system and of the front-end development tool during 1996. Plans are also being made to start the development of Release 4 using the new versions of this software. This migration will require very careful planning and retesting of the entire application. The work, which will involve the IMIS team and users, is expected to take place over several months.

IX. MAINTENANCE OF THE SYSTEM

97. As indicated in the previous progress reports and in the proposed programme budget for the biennium 1996-1997 related to IMIS, 12/ in the past the Organization has failed to understand the importance of information and management systems and did not devote adequate resources to the development and maintenance of such systems. This led to the current situation that is being obviated through the introduction of IMIS. The investment made by the Member States in the development of the system therefore requires that a careful maintenance plan be established so that the software and its various elements do not become obsolete, but can evolve along with the needs of the Organization, capitalizing on all the analytical work done over the past few years.

98. In the fifth and sixth progress reports, it was indicated that a study on the long-term maintenance of IMIS would be undertaken and that the results would be submitted to the General Assembly at its fiftieth session.

99. Early in 1995, the IMIS quality assurance consultant was requested by the IMIS Steering Committee to submit a comprehensive strategy proposal for the long-term maintenance of information technology in the administrative areas, its primary, but not exclusive, focus being IMIS. The bases for this study were the report of independent experts requested by the General Assembly in 1991 and the recent reports of the Board of Auditors.

100. On the basis of the above report, the IMIS Steering Committee decided to create one central technical maintenance unit for IMIS that would work closely with the systems/information units existing in offices in the Department of Administration and Management. While the central maintenance unit, as described below, will concentrate on system development and maintenance, the other units will work more on the maintenance/integration of specialized systems or of systems ancillary to IMIS, on data maintenance, users' support, local and world-wide reports generation and analysis. During a transitional period they will also continue to maintain current systems which, to a large extent, will be phased out towards the end of the biennium.

101. In his report, the consultant, on the basis of industry standards, recommended a team composed of 48 staff at a minimum. The Steering Committee however, in consultation with the IMIS team and the contractor developing the software, reached the conclusion that it would be feasible to ensure an adequate level of maintenance of the system by staffing the unit with 37 staff members only. Initially, it is proposed to staff the unit with 35 staff, of which 8 would be temporarily redeployed from within the Department of Administration and Management and the balance funded under general temporary assistance. The maintenance team will be phased in during the biennium as the project team is phased out. It will be composed of three groups of staff (see annex II):

(a) Business analysis. These functions are similar to those performed by the current coordinators and systems analysts for the development of the system. A team of seven staff members is recommended. The main responsibilities of this team will include: review and evaluation of requests for changes and new functionalities coming from the user areas; recommendations for modifications; writing design specifications; providing guidance to the programmers; writing and updating procedures and documentation; review and testing of programmes; and support to the information units in the offices in the Department of Administration and Management.

(b) Programming. A total of 12 programmers, one chief of team and two support staff, is recommended. The number of staff to be assigned to this unit was determined on the basis of the experience gained during the development of the system. The main responsibilities of this team will include: writing programmes in accordance with specifications provided by the analysts team; writing urgent "fixes" that may be required; and providing assistance to the information units at Headquarters, and possibly at offices away from Headquarters, in the design and development of ancillary systems, report-writing and end-users' support in the area of reports.

(c) Technical support. These are new functions that have so far been partially performed by the contractor under the development and maintenance agreements, and partly by two IMIS team members. The number of posts has been reduced to a minimum, seven, as each staff member will in fact be performing back-up tasks for another member of the team. The main responsibilities of this team will include: database administration; database support for the maintenance team; monitoring of the world-wide data distribution and data synchronization mechanisms; coordination and verification of the activities performed by the users for the maintenance of the system's reference tables; coordination of disaster recovery activities; coordination of quality assurance activities for software modifications; and testing of new releases of the commercial software used for the system and planning and coordination of migration to these new versions.

102. Management of the maintenance unit would be kept to a minimum: one chief, one administrative officer, three support staff for the entire unit and one P-2 staff member to coordinate world-wide help desk activities, to be performed by each office. The work programme of the unit will be determined by the IMIS Steering Committee upon the submission of recommendations by the chief of the unit on the work priorities determined in consultation with the chiefs of the information management sections of the offices in the Department of Administration and Management. As described below, some activities will also be coordinated with the Field Administration and Logistics Division, UNDP, UNICEF, UNHCR and ILO.

103. It should be noted that all these functions will be performed centrally also for all offices away from Headquarters.

104. Initially, eight technical staff members will be redeployed temporarily to this unit from within the Department of Administration and Management (three Professionals and one General Service from the Systems Support Section, the Accounts Division, the Office of Programme Planning, Budget and Accounts, two Professionals from the Infrastructure and Applications Support Section, the Electronic Services Division, Office of Conference and Support Services, one Professional from the Financial Management Office, Office of the Under-Secretary-General, Department of Administration and Management and one General Service staff from the Office of Human Resources Management).

105. As mentioned earlier, for many years only limited resources were assigned to system maintenance within the Department of Administration and Management. Owing to the need to run IMIS and some other financial and personnel systems in parallel until all duty stations have implemented IMIS, it will not be possible to assign all of these already scarce resources to IMIS maintenance. Thus, the initial temporary redeployment of eight posts only was decided. It is expected that, with the implementation of the system and the revision and simplification of procedures, it will be possible, by the end of the biennium, to identify additional posts that could be redeployed to the central maintenance unit. It is, however, impossible at this time to foresee the exact number of these posts.

106. For the biennium 1998-1999, a more stable set-up will be proposed, together with the creation of established posts to replace the current temporary assistance.

107. During the biennium 1996-1997, the IMIS maintenance unit will still report to the Under-Secretary-General for Administration and Management and be under the daily supervision of the Assistant Secretary-General for Conference and Support Services. The final location of the unit for the following bienniums will be determined within the framework of the review of the overall information technology policy of the Organization that will be planned for 1996.

X. PEACE-KEEPING MISSIONS

108. Since mid-1994, the cooperation between the Department of Administration and Management and the Department of Peace-keeping Operations concerning systems has continued to increase. The Field Administration and Logistics Division has become the major user of IMIS personnel applications (see annex I). The introduction of the system facilitated the identification of areas where procedural and policy issues had to be streamlined and clarified to enable the Organization to cope with the volume and frequency of the operations related to peace-keeping, and that had been the main reason for the backlogs that existed when IMIS was introduced. These problems were addressed and the Division is taking full advantage of the system.

109. Early in 1995, in order to ensure greater coordination between the above two Departments, the Assistant Secretary-General, Office of Planning and Support, was appointed as a full member of the IMIS Steering Committee. Recently, the Department of Peace-keeping Operations decided to start deploying IMIS at some established missions during the first half of 1996. A detailed analysis of the personnel applications was conducted by the Field Administration and Logistics Division and the changes required to adapt IMIS to the specific requirements in field missions were identified. A plan to implement such changes is now being developed jointly by the Department and IMIS.

110. Staff of the Field Administration and Logistics Division participate actively in the testing of Release 3 applications, in particular as far as transactions directly related to the specific activities of the Department of Peace-keeping Operations are concerned. Staff also participate actively in the testing of procurement software, in the development of an item-numbering scheme for the United Nations catalogue and in the deployment of the procurement software at the Economic Commission for Africa (ECA) and at the Economic Commission for Latin America and the Caribbean (ECLAC).

111. Finally, the Field Administration and Logistics Division and Electronic Services Division staff have been working closely to determine the best possible technical solution for the remote accessing of IMIS from the field. Such a solution would provide greater flexibility for the deployment of the system to peace-keeping missions and to the redeployment of equipment whenever necessary. It would also ensure greater security of the data stored in IMIS, since this will reside at Headquarters.

112. The technical and organizational challenges are, however, major and the two Departments are cooperating closely to limit the risks connected with this undertaking.

XI. USAGE OF IMIS BY OTHER ORGANIZATIONS

113. ILO successfully implemented Release 1, personnel processing, in March 1995, and this is currently accessed by about 170 users. ILO had financed some modifications to the software so that specific ILO requirements could be incorporated in the main version of IMIS. In this way, it will not need to devote too many resources to the maintenance of its own copy of the system.

114. ILO is now cooperating with the United Nations and UNDP in the establishment of common procedures for the maintenance of the system.

115. The Secretary-General decided that, in order to meet the desire of Member States to improve efficiency, avoid duplication of effort, maximize the return on the investment made and, above all, to implement coherent and consistent management controls, the IMIS system should be used by the United Nations as a whole. UNDP had already decided to implement the system, and is well advanced towards its installation early in 1996. The Secretary-General requested the Heads of UNICEF and UNHCR to initiate planning for the implementation of IMIS. As IMIS was custom-designed for the United Nations, it will need adjustments to meet fully some of the requirements specific to those organizations that are more field-oriented. At the same time, efforts will have to be made by UNDP, UNICEF and UNHCR to find common solutions to the requirements of systems to be deployed to the field, it being understood that all of these systems will have to be IMIS-compatible.

116. This decision, together with the action already undertaken by ILO and UNDP, will result in considerable savings for the Member States, savings that are estimated to exceed the investment made. It should be noted that it is expected that it will take several years before the transition to IMIS by these organizations can be completed.

XII. CONCLUSIONS

117. The biennium 1996-1997 will see the efforts made over the past six years come to fruition. The impact of the project and of the introduction of the system goes far beyond what was originally expected, because new administrative procedures, new management behaviour, new technologies and new information technology strategies had to be developed and introduced. It has been a difficult process and major difficulties will still have to be faced during the biennium. It can, however, be stated that the Organization as a whole will benefit from this experience and that, also because of this major undertaking, the Organization will soon be able to be more responsive to the requests of Member States for increased efficiency, accountability and responsibility. The project, however, should be seen only as the first step towards a more continuous and steady effort to improve efficiency in the Secretariat through advanced technological innovations.

Notes

1/ A/C.5/44/8.

2/ A/C.5/45/20.

3/ A/C.5/46/24.

4/ A/C.5/47/27.

5/ A/C.5/48/12.

6/ A/C.5/48/12/Add.1.

7/ JIU/REP/95/8, transmitted to the General Assembly in document A/50/507.

8/ United States General Accounting Office, Financial Management, document GAO/AIMD-94-141, August 1994; Auditor General of Canada, Systems under Development: Managing the Risks, October 1995.

9/ A/C.5/49/41.

10/ A/C.5/48/12, paras. 8-10.

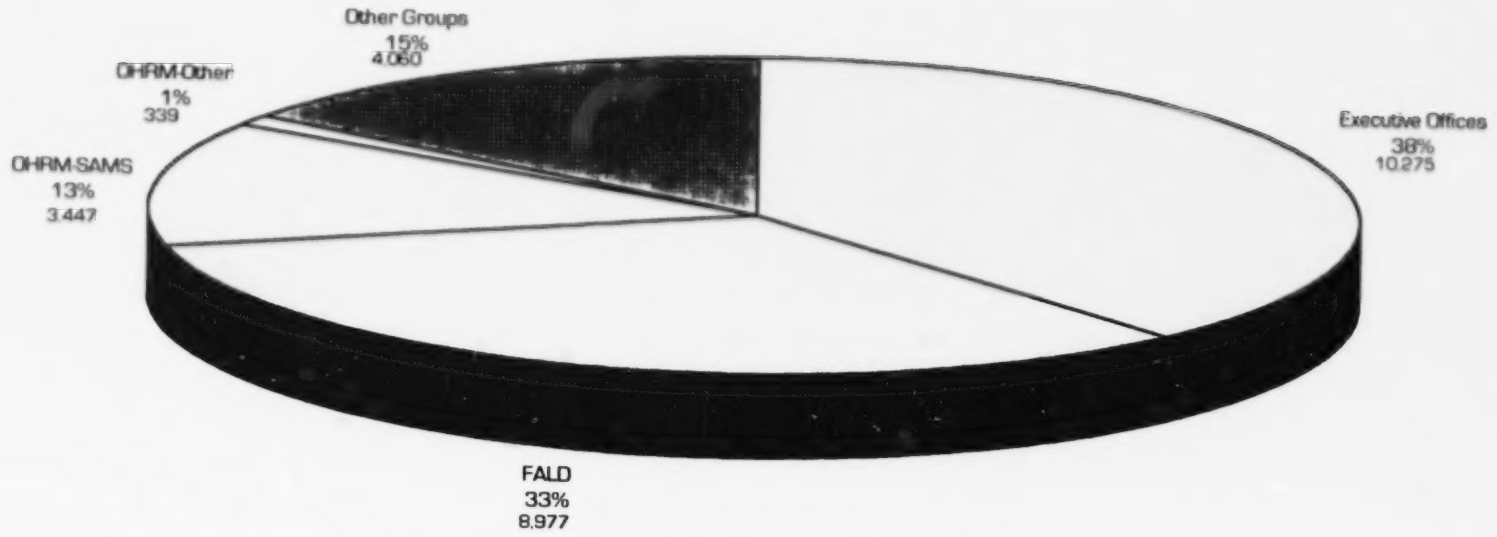
11/ ST/SGB/276, para. 5.

12/ Official Records of the General Assembly, Fiftieth Session, Supplement No. 6 (A/50/6/Rev.1), Sect. 30.

Annex I

IMIS Personnel Actions Processed during 1995

(January to Mid-October)



Total Number of Personnel Actions: 27,098

Annex II

IMIS Central Maintenance Structure